

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0003] of the specification, by replacing the paragraph which begins on page 1, line 9 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

Meters are used to measure electricity consumption ~~(stock)~~

Please replace paragraph [0004] of the specification, by replacing the paragraph which begins on page 1, line 10 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

To this end, they include sensor devices ~~the~~ that connect to and or interact with the utility power lines (sensor equipment) and electronic circuits for performing various calculations using signals generated by the sensor devices.

Please replace paragraph [0005] of the specification, by replacing the paragraph which begins on page 1, line 13 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

Sensor devices typically include blades received by meter socket jaws and provide a mechanically and electrically sound connection for handling large currents and voltages. The blades are often connected within the meter by large current carrying conductors. Sensor devices may also include current measurement devices, which can include a sensing coil of some sort. Voltage and current signals are obtained from these

devices and provided to a circuit board that may include a/d converters and processing circuits that perform metering calculations.

Please replace paragraph [0006] of the specification, by replacing the paragraph which begins on page 2, line 1 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

One source of cost in the meter is the connection between the sensor devices and the electronic circuitry on the circuit board. Sensor devices are too large to be on circuit board. Typically, sensor devices are mounted to the housing below circuit board and then wire connections are provided to the circuit board. Wires are soldered or connected by terminals.

Please replace paragraph [0007] of the specification, by replacing the paragraph which begins on page 2, line 6 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

The manufacturing process of wiring sensor devices to a printed circuit board in a meter has drawbacks[.], including the ~~The~~ labor cost of individually connecting wires, as well as potential quality problems[.], e.g., difficult to run wires and manipulate them in the small interior.

Please replace paragraph [0008] of the specification, by replacing the paragraph which begins on page 2, line 10 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

One alternative is provided by Schlumberger. ~~Meter~~ This meter has preformed mounts for sensors, and leaf spring terminals that extend upward from the sensors to the circuit board. ~~Alleviates~~ Although this meter alleviates the drawbacks of handwiring, ~~but it~~ still has drawbacks.

Please replace paragraph [0010] of the specification, by replacing the paragraph which begins on page 2, line 20 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

By way of example, FIGS. 1a, 1b, 1c, 1d, 1e, 1f, 1g and 1h show different sensor wiring configurations for different meter forms. Each of FIGS. 1a-1h shows a representation of a meter base 12 showing the layout of the current blades 14 and a schematic diagram of the connections within the meter base 12, including transformers/coils 16, potential blades 18 and neutral blades 18a. In addition, many meter forms include switchable potential links 19 as is known in the art.

Please replace paragraph [0017] of the specification, by replacing the paragraph which begins on page 4, line 21 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

FIGS. 1a-1h show wiring diagrams for various metering forms;

Please replace paragraph [0024] of the specification, by replacing the paragraph which begins on page 5, line 14 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

FIG. 2 shows a schematic block diagram of a meter 100 that incorporates aspects of the present invention. The meter 100 is configured to measure energy delivered to a load via power lines 110. The meter 100 includes sensor devices 112, a configurable interface 114, and an electronic measurement circuit 116. The sensor devices 112 connect to power lines 110 and generate signals representative of the voltage and current waveforms on the power lines 110. To this end, the sensor devices 112 include one or more current blades, such as the current blades ~~12-14~~ of FIGS. 1a-1h. The sensor devices 112 may further include voltage and current sensing and/or scaling devices as is well known in the art.

Please replace paragraph [0026] of the specification, by replacing the paragraph which begins on page 6, line 10 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

The configurable interface 114 provides an electrical connection between one or more of the sensor devices and the electronic measurement circuit 116. The configurable interface 116 has a standard interface to the electronic measurement circuit 116, a standard interface to the sensor devices 112, and provides a configurable set of connections between the

standard sensor interface and the standard measurement circuit interface.

In the embodiment described herein, the configurable interface 114 primarily provides voltage or potential measurement connections between the sensor devices 112 and the electronic measurement circuit 116. Current measurement connections are provided independent of the configurable interface 114, as illustrated by line 114a of FIG. ~~3~~ 2. However, it will be appreciated that current measurement connections may also be made through the configurable interface 114 if desired.

Please replace paragraph [0034] of the specification, by replacing the paragraph which begins on page 8, line 21 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

In particular, as discussed above, the conductive piece of metal 136 has uniform contact connectors (e.g. 140a, 140b, 140c) that can receive current blades arranged for use in a number of meter forms. The conductive piece of metal 136 furthermore has uniform circuit board contact outputs (e.g. contact output 144c of FIG. ~~3~~ 5) that are electrically connected to the circuit board 154 discussed further below. For each meter form, different connections must be made between the circuit board contact outputs, current blades and even transformer or switch connections. The circuit board contact outputs (see outputs 144a- 144d of FIGS. 4 and 5) allow voltage or potential measurements from the sensor

blades and/or devices to be provided to the measurement circuit 116 on the circuit board 154.

Please replace paragraph [0047] of the specification, by replacing the paragraph which begins on page 13, line 3 with the following replacement paragraph which shows all changes relative to the previous version of the paragraph:

As discussed above, the embodiment of the meter 100 shown in FIG. 3 is shown as a 16S meter form, which corresponds to the FIG. ~~4e~~ 1a standard wiring diagram. In a 16S meter form, voltage measurements are taken from each phase voltage with respect to a neutral. Specific to the meter form (see FIG. 1a), the voltage measurements are typically taken at the output of the potential link as is known in the art. To this end, in the meter 100 of FIG. 3, the contact connectors 140a, 140b, and 140c obtain the phase A, B and C voltages, respectively. The conductive piece of metal 136, which will have been previously punched out in a predetermined pattern defined for a 16S meter form, will provide the phase A voltage to the leaf spring connector 148a through the output contact 144a (see FIG. 4). The conductive piece of metal 136 will similarly provide the phase B voltage to the leaf spring connector 148b through the output contact 144b (see FIG. 4), and provide the phase C voltage to the leaf spring connector 148c through the output contact 144c. In a 16S meter form, each of the above connections further occurs through

a potential link, not shown, connected to two of the screw terminals 158b-
158g.